

Book review of 'Self comes to mind' By Antonio Damasio, (2012)

In this book, Damasio sets out on an ambitious challenge – to create a plausible chronology of how the human mind has evolved the capacity to have a life long sense of personal agency and self awareness, and to integrate research that is relevant to this, though it comes from many diverse disciplines. Thus he takes up debates that have often been till now mainly the prerogative of consciousness psychologists, which, because it is often seen as an overly abstract and esoteric subject, has attracted the interest of a small number of social scientists. This book will be of interest to a wider readership who have an interest in, or work with client's sense of self as part of applied psychology or therapy.

He starts this chronology by examining the fundamental drives and motivations (primordial feelings) of all species to regulate behaviour in the environment to optimize survival and reproduction and the importance of mechanisms that create homeostasis in this. He then goes on to show how this is extended by mutations that enable prediction of threats and affordances in the environment through the forming of neurally held images and maps (as seen in a wide variety of species). The ability to form and hold these greatly enhances an individual's life regulation through having more detailed information on the conditions in the world, and in the organism's own body (muscle tension, heart rate etc), and can thus generate more differentiated and effective responses. This created the awareness of the experience of pleasure, pain, emotional states and moods, which not only allowed hugely increased social behaviour, but also guided the more complex appraisal, organization and selection of the neural images and maps that are most salient for optimising immediate behaviour and life history trade offs in the local environment.

This he posits as the beginning of consciousness, which would have been selected for because it added the possibility of 'knowing' and building up of experiences in memory 'topic stores' relevant to predicting the environment, and the individual's reaction to threats etc. This in turn led to building, recalling and manipulating the mental representations with reasoning, leading to reflection and deliberation and greater control of the organism's reactions to events through imagination. This development of imagination, previewing and intentions of management is then the basis of a sense of personal agency, and personal autobiographical mind, coordinated in an ever increasing 'working memory' capability.

In the final part of the chronology, he shows that this sense of self that is generated has been then increasingly elaborated by the growth of neural complexity influenced by environmental, social and cultural influences: for example, the evolution of mirror neurons, the development of writing and story telling, the aggregation of people in large numbers through the establishment of agricultural practices, into a mind that we experience in our modern consciousness. This section is slightly more speculative than the previous sections, but is realistic in tying in various new perspectives such as gene/ culture co-evolution and multi level selection. This may prove controversial, but may also prompt new lines of enquiry.

In the very last section he provides an appendix which explains in much more detail the physiological and neural changes that seemed to have happened in the previous evolutionary chronology, and some of the evidence for this; this is very helpful.

Overall, the book is very timely, in providing a framework for exploring more deeply the relationship between the evolutionary psychology explanation of modern consciousness which is somewhat more theoretical, and the more empirical biological and neuroscientific evidence of processes that are involved in bringing this about in individual organisms.

In its width of perspective I feel it will be useful in prompting further research, not only into the mechanisms that are most relevant, but also on how to integrate knowledge from the diverse fields that are involved in developing a fuller picture of the evolution of modern consciousness.